

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the subject application. The final Office Action of April 8, 2003 has been received and contents carefully reviewed. Claims 1-17 are currently pending in this application. Reexamination and reconsideration of the application are respectfully requested.

In the Office Action, the Examiner rejected claims 1 and 12 under 35 U.S.C. § 112 ¶ 1; rejected claims 1-2 under 35 U.S.C. § 103(a) as being unpatentable over Vorfloussev (U.S. Patent No. 5,973,762) in view of Reimer et al. (U.S. Patent No. 5,844,651); rejected claims 3-5 under 35 U.S.C. § 103(a) as being unpatentable over Vorfloussev and Reimer et al. as applied to claim 1 above, and further in view of Yoshinaga et al. (U.S. Patent No. 5,372,745); rejected claims 6-11 under 35 U.S.C. § 103(a) as being unpatentable over Vorfloussev and Reimer et al. as applied to claim 1 above, and further in view of Mitsui et al. (U.S. Patent No. 5,734,457); rejected claims 12-13 under 35 U.S.C. § 103(a) as being unpatentable over Vorfloussev and Reimer et al. as applied to claim 1 above, and further in view of Yoshinaga et al. (U.S. Patent No. 4,995,705); rejected claims 14-17 under 35 U.S.C. § 103(a) as being unpatentable over Vorfloussev, Reimer et al. and Yoshinaga et al. as applied to claim 12 above, and further in view of Mitsui et al. Applicants respectfully traverse these rejections.

The rejection of claims 1 and 12 under 35 U.S.C. § 112 ¶ 1 is respectfully traversed and reconsideration is requested.

The Examiner states, "The new matter in the claims is 'nematic liquid crystal.'" See Office Action on pages 2. Applicants respectfully submit that the "nematic liquid crystal" is properly discussed in the present application. Applicants respectfully submit that paragraph [0049] of the present specification recites a "nematic liquid crystal layer." Accordingly, Applicants respectfully submit that claims 1 and 12 are in full compliance with 35 U.S.C. § 112, first paragraph.

Applicants respectfully submit that independent claim 1 is allowable over the cited references in that claim 1 recites a combination of elements including, for example, "a nematic liquid crystal layer between the first and second substrates, wherein said first orientation film

includes a ferroelectric liquid crystal polymer.” None of the cited references including Vorfloussev, singly or in combination, teaches or suggests at least these features of the claimed invention. Accordingly, Applicants respectfully submit that independent claim 1 and claims 2-11, which depend therefrom are allowable over the cited references.

In the Office Action, the Examiner states, “Vorfloussev does disclose that the liquid crystal material is in its nematic phase (col. 5, lines 19-20) ...” See Office Action on page 6. However, Applicants respectfully submit that the nematic phase in Vorfloussev is only a temporary or intermediate state during the gradual cooling process to form the ultimate phase of smectic C* for the operation of the FLC. See col. 5, lines 11-49 of Vorfloussev.

In the Office Action, the Examiner further states, “Besides, the applicant never really argued in his response about any unique advantages of using such a ferroelectric liquid...” See Office Action on pages 6-7. Applicants respectfully submit that the Examiner’s assertion that there are several other ways to achieve one of the advantages of the present invention does not necessarily mean that the present invention is unpatentable. The present specification does provide examples of advantages of the present invention such as in paragraphs [0060] and [0061].

In the Office Action, the Examiner also states, “Reimer in disclosing a liquid crystal display, discloses the use of liquid crystal alignment films (4a and 4b) for liquid crystal display applications.” See Office Action on page 4. Applicants respectfully submit that the liquid crystal alignment films (4a and 4b) are made of polyimide or SiO₂, which necessary means that they are not liquid crystal type orientation films. See col. 1, lines 9-19 of Reimer. Moreover, Applicant notes that an alignment film is sometimes referred to as a “liquid crystal alignment film” because the alignment film aligns the liquid crystal, and not because the alignment film itself is made of liquid crystal. Reimer does not teach or suggest an alignment film made of liquid crystal.

Applicants respectfully submit that independent claim 12 is allowable over the cited references in that claim 12 recites a combination of elements including, for example, “forming a first orientation film having a ferroelectric liquid crystal polymer on the first electrode; forming a second orientation film on the second electrode; and forming a nematic liquid crystal layer between the first and second substrates.” None of the cited references including Vorfloussev,


singly or in combination, teaches or suggests at least these features of the claimed invention. Accordingly, Applicants respectfully submit that independent claim 12 and claims 13-17, which depend therefrom, are allowable over the cited references.

Applicant believes the foregoing amendments place the application in condition for allowance and early, favorable action is respectfully solicited. If the Examiner deems that a telephone conference would further the prosecution of this application, the Examiner is invited to call the undersigned attorney at the telephone number (202) 496 - 7500. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911.

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Respectfully submitted,

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